1-15-14

1st Geo

① What is the sum of all
the interior angles in
an octagon?

$$(n-2) \cdot 180°$$
$$6 \cdot 180°$$
$$1080°$$

② 



15n    10n

10n    540

10n

9n
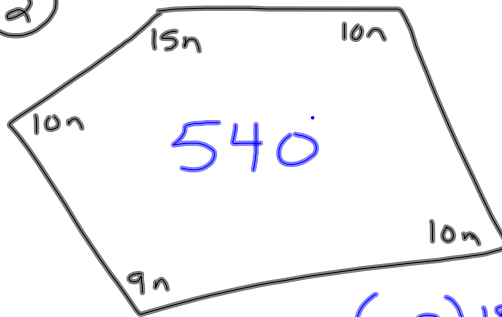
Find n.

$$(n-2) \cdot 180°$$
$$(5-2) \cdot 180°$$
$$540°$$

$$15n + 10n + 10n + 9n + 10n = 540°$$
$$54n = 540$$
$$n = 10$$

③ How many degrees is
each angle in a decagon?
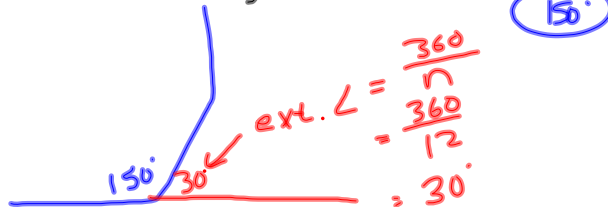
144°   36

ext ∠ = $\frac{360}{n}$

= $\frac{360}{10}$

= 36

1
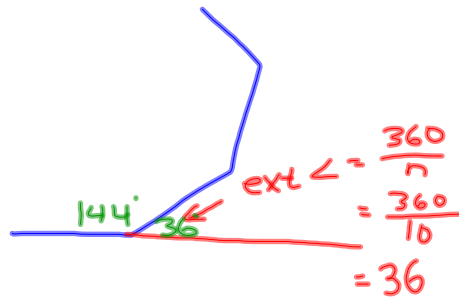
④ The measure of an interior angle of a regular polygon is 162°. How many sides does the polygon have?

162° / 18°
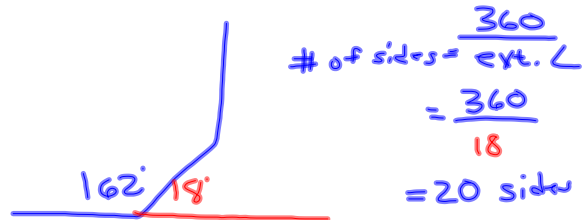
$\text{\# of sides} = \dfrac{360}{\text{ext.} \angle}$

$= \dfrac{360}{18}$

$= 20 \text{ sides}$

⑤ What is the interior angle of a regular dodecagon?

150° / 30°

ext. $\angle = \dfrac{360}{n}$

$= \dfrac{360}{12}$

$= 30°$

$\boxed{150°}$

⑥ What is the interior angle to a regular polygon that has 60 sides?

174° / 6°

ext $\angle = \dfrac{360}{60}$

$= 6°$